



# NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES

## RECOMMENDED ANALYTICAL METHODS FOR PETROLEUM CONTAMINATED SITES (see note 1)

PETROLEUM PRODUCT	WATER MATRIX			SOIL MATRIX (see note 2)		
	Analytes	Recommended Analytical Methods		Analytes	Recommended Analytical Methods	
		Initial Round	All Other Samples (see notes 3 & 9)		Initial Round	All Other Samples (see note 3 )
<b>Gasoline and similar weight product</b>	VOC (see note 4)	Full VOC List	Full VOC List	VOC (see note 4)  TPH-as Gasoline	Full VOC List (see note 8)  8015B-GRO (see note 8)	Full VOC List  (see note 8) 8015B-GRO (see note 8)
<b>No. 2, 4, 6 Fuel Oil Diesel Waste Oil(see note 5) and similar weight product</b>	VOC (see note 4)  PAH (see note 6)	Full VOC List  8310 or 525 or 8270(see note 7)	Full VOC List  8310 or 525 or 8270(see note 7)	VOC (see note 4)  PAH(see note 6),  TPH-as Fuel Oil  As, Ba, Cd, Cr, Pb, Hg, Se, Ag (waste oil only- see note 5)	Full VOC List (see note 8)  8270 or 8310,  8015B-DRO  6010 or 7060, 7080, 7130, 7190, 7420, 7470, 7740 cold vapor, 7760	Full VOC List  (see note 8) 8270 or 8310  8015B-DRO  6010 or 7060, 7080, 7130, 7190, 7420, 7470, 7740 cold vapor, 7760

VOC: Volatile Organic Compounds  
 TPH: Total Petroleum Hydrocarbons  
 DRO: Diesel Range Organics  
 GRO: Gasoline Range Organics  
 PAH: Polyaromatic Hydrocarbons

P&T-GC/FID: Purge and Trap - Gas Chromatography / Flame Ionization Detector  
 TCLP: Toxicity Characteristic Leaching Procedure  
 AGQS: Ambient Groundwater Quality Standards  
 RCMP: NHDES Contaminated Sites Risk Characterization and Management Policy

- NOTES:**
- (1) EPA method results must be reported to DES according to SW 846 current edition.
  - (2) Soils destined for off-site treatment must be analyzed in accordance with Env-Or 611.
  - (3) For the purpose of site closure, the analytical method shall be capable of detecting concentrations at or below the regulatory cleanup level.
  - (4) For VOC analytical methods and reporting requirements, see the footnotes in the "Petroleum and Hazardous Waste Full List of Analytes for Volatile Organics"
  - (5) Metals analysis must be performed on waste oil contaminated soils. Soil standards in the NHDES RCMP (Appendix E) are based on total metals. Analysis for soils destined for off-site treatment is based on TCLP.
  - (6) PAH analysis shall be completed on all sampling locations during the initial round of sampling for soil and water.
  - (7) DES may require multiple dilution runs or compound specific analysis for selected compounds to reach the required VOC standard.
  - (8) Soil samples collected for VOC analysis shall use EPA 5035 (methanol preservation) as required in the NH DES Soil Policy.
  - (9) DES May require additional field testing and laboratory analysis of geochemical indicators a site specific basis.